

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
Connect America Fund)	WC Docket No. 10-90
)	
Universal Service Reform – Mobility Fund)	WT Docket No. 10-208

REPLY COMMENTS OF THE RURAL WIRELESS ASSOCIATION, INC.

RURAL WIRELESS ASSOCIATION, INC.

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SUMMARY

The Rural Wireless Association, Inc. (“RWA”) files these comments in response to the Federal Communications Commission’s (“FCC” or “Commission”) Public Notice proposing and seeking comment on specific parameters and procedures to implement the Mobility Fund Phase II (“MF-II”) challenge process.

RWA urges the Bureaus to ensure that the challenge process timeline does not impede participation. First, the Bureaus should consider the impact of winter weather on the challenge process, and modify the proposed timeline accordingly. In particular, the Bureaus should ensure that the challenge window is open through the entirety of the summer months and that it be no shorter than 150 days in length. In order to efficiently use the 150-day challenge period, RWA further urges the Bureaus to provide prospective challengers with at least 30 days’ notice ahead of the USAC portal opening.

RWA is concerned about the Bureaus’ proposed use of a one square kilometer grid to determine challenge areas on the initial eligibility map. In the majority of rural America, roads are situated directly on the borders of a one *mile* by one *mile* grid. A one square kilometer grid cell could be entirely encapsulated within a one square mile road grid cell, leaving no access to drive a complete single kilometer-based grid cell. In such a case, the Bureaus should create an exception applicable to rural areas where road grids are one square mile or larger. The Bureaus should also consider allowing challengers to take their measurements along the boundaries of the census block or census tract being challenged and using a larger grid and a larger buffer radius.

Further, the Bureaus should modify the proposal regarding speed throttling. RWA continues to believe that it would be much more efficient for the challenger and challenged carrier to coordinate this issue *before* the speed test data is recorded. Such coordination will

allow challengers to review actual speed data as it is compiled, and make reasonable determinations as to whether a particular challenge is likely to be successful. Such coordination would also render Verizon’s proposals regarding speed test measurements and speed reduction reports – proposals that RWA opposes – unnecessary.

The Bureaus should require service providers to identify a variety of handset models appropriate for testing coverage. First, carriers that support both Android and iOS Devices should be required to ensure that at least one of the three identified testing devices uses the Android operating system. Also, the Bureaus can reduce barriers to testing challenges by setting an upper limit on the per-device cost of a readily available handset model, regardless of operating system.

RWA urges the Bureaus *not* to require challengers to submit extraneous data parameters when download speeds are the only factor in determining an area’s MF-II funding eligibility. RWA opposes Verizon’s proposal to require prospective challengers submit *even more* information than originally proposed to mount a successful challenge.

Finally, RWA joins other parties in urging the Bureaus to clarify that a “qualified engineer” may work directly for an operator or a vendor on behalf of an eligible challenger, and reiterates its concern regarding the appropriateness of transmitter monitoring data used to rebut a challenge.

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REPLY COMMENTS OF THE RURAL WIRELESS ASSOCIATION, INC.

The Rural Wireless Association, Inc. (“RWA”) replies to the comments filed in response to the Federal Communications Commission (“FCC” or “Commission”) Public Notice¹ in which the Rural Broadband Auctions Task Force, Wireline Competition Bureau, and Wireless Telecommunications Bureau (together, the “Bureaus”) propose and seek comment on specific parameters and procedures to implement the Mobility Fund Phase II (“MF-II”) challenge process.

I. THE BUREAUS SHOULD ENSURE THAT THE CHALLENGE PROCESS TIMELINE DOES NOT IMPEDE PARTICIPATION.

RWA’s members are concerned that the challenge process timeline is too short and will prevent smaller carriers with limited resources from participating, especially if the timeline covers harsh winter months. RWA appreciates the Bureaus’ effort to provide parties information as to the expected challenge process timetable. The deadline for submission of the new, one-time 4G LTE provider coverage data is January 4, 2018.² The Bureaus are “expect[ing] to make public a map of areas presumptively eligible for MF-II support no earlier than four weeks after

¹ *Comment Sought on Mobility Fund Phase II Challenge Process Procedures and Technical Implementation*, [Public Notice](#), WT Docket No. 10-208, WC Docket No. 10-90 (rel. Oct. 18, 2017) (“Public Notice”).

² *Responses to the Mobility Fund Phase II 4G LTE Data Collection Are Due By January 4, 2018*, [Public Notice](#), DA-17-975, WC Docket No. 10-90, WT Docket No. 10-208 (Oct. 6, 2017).

the deadline for submission of the new, one-time 4G LTE provider coverage data”³ (i.e., on or after February 1, 2018). The Bureaus have proposed “that the challenge process window open on the next business day following the release of the map” (i.e., on February 2, 2018). The Bureaus have then determined that “[e]ligible parties would be able to access the USAC portal and download the provider-specific confidential data necessary to begin conducting speed tests on that day” (i.e., as early as February 2, 2018) with “[t]he challenge window...clos[ing] 150 days later...”⁴ (i.e., as early as July 2, 2018).

a. The Bureaus Should Consider the Impact of Winter Weather on the Challenge Process and Modify the Proposed Timeline Accordingly.

The challenge window would effectively start with the release of the map of presumptively eligible areas and the opening of the USAC portal, which may happen as early as February 2, 2018. RWA agrees that “[t]he Commission’s proposed timeline for the challenge process could be problematic in many rural markets” because as proposed “the timeline could have rural providers performing the bulk of their drive testing during the height of winter.”⁵ Like RWA, NTCA is rightly concerned about the impact that: (1) inclement winter weather could have on small and rural carriers’ ability to effectively participate in the challenge process; and (2) the lack of foliage will have on accurately determining service availability.⁶

³ *Public Notice* at ¶ 28, n.69 (stating that, “contemporaneous with the publication of the map of presumptively eligible areas, we will announce via public notice the availability of this data and subsequent commencement of the challenge window”).

⁴ *Id.* at ¶ 28.

⁵ *Connect America Fund, Universal Service Reform – Mobility Fund*; [Comments](#) of NTCA – The Rural Broadband Association; WC Docket No. 10-90, WT Docket No. 10-208; at pp. 3-4 (Nov. 8, 2017) (“*NTCA Comments*”).

⁶ *See Connect America Fund, Universal Service Reform – Mobility Fund*; [Comments](#) of the Rural Wireless Association, Inc., WC Docket No. 10-90, WT Docket No. 10-208, at p. 3, n. 7 (stating “[d]epending on the ultimate timing of initial map release and portal opening, RWA cautions the Bureaus that inclement fall and winter weather in areas of difficult terrain and/or

While drive testing could be performed along major thoroughfares under winter weather conditions, the areas that are most likely to be unserved are those that are difficult to access during the winter months. Many wilderness areas frequently visited during the summer are difficult and dangerous, if not impossible, to reach during the winter. Like NTCA, RWA's members "serve many [mountainous and northern] areas that face a harsh season with areas that are inaccessible because of snow."⁷ These areas receive heavy snowfall well into spring. RWA agrees that "[f]or smaller providers...condensing [drive testing] activities into a shortened spring window is likely to be particularly burdensome."⁸

In addition, RWA shares NTCA's concern that "the accuracy of measurements is vastly different in winter as compared to summer, particularly in rural areas."⁹ Because "[l]eaves, shrubs and crops can cause attenuation, scattering, diffraction, and absorption of the radiated waves," RWA is concerned that "[t]esting during the winter months is likely to overstate service availability in many rural areas."¹⁰

RWA agrees with NTCA that "the proposed timeline should be adjusted to ensure a reasonable opportunity to gather data in rural areas and to ensure that the data gathered accurately represents service availability when foliage is intact."¹¹ In particular, "the Commission should ensure that the challenge window is open through the entirety of the summer months and that it be no shorter than 150 days in length."¹² RWA believes that this short delay is unlikely to have any material effect on the reverse auction, will help ensure that support is

high elevations could negatively impact some RWA members' ability to complete drive tests and meet the challenge submission deadline") (*RWA Comments*).

⁷ *NTCA Comments* at p. 4.

⁸ *Id.*

⁹ *Id.* at p. 5.

¹⁰ *Id.*

¹¹ *Id.* at p. 4.

¹² *Id.* at pp. 5-6.

targeted to where it is needed, and may actually provide the benefit of giving USAC the time necessary to complete the challenge portal.

b. The Bureaus Should Ensure That Prospective Challengers Can Make Full Use of the 150-Day Challenge Process Window.

RWA is pleased that the Commission provided prospective challengers with a 150-day window, rather than the wholly inadequate 60 days proposed by various parties.¹³ However, RWA agrees with the Competitive Carriers Association that “challengers, especially small and regional carriers in rural areas, likely will be hard-pressed to file the required documentation within the challenge period adopted in the *MF-II Challenge Process Order*.”¹⁴ As such, it may be impossible for challengers “to file in advance of the date to allow ample time for data processing,” as the *Public Notice* encourages.¹⁵ RWA joins CCA in urging the Bureaus to “allow challenging parties to utilize the full filing window, at least, and not to place more stringent time pressures on filers,” and agrees that the Bureaus “can briefly postpone opening the reply window should it need extra time for data processing.”¹⁶

In order to efficiently use the 150-day challenge period, RWA further urges the Bureaus to provide prospective challengers with at least 30 days’ notice ahead of the USAC portal opening. Providing at least 30-days’ notice ahead of the USAC portal opening will allow prospective challengers to make full use of the time they have to mount a challenge. Such notice

¹³ *Public Notice* at ¶ 28; see also *Connect America Fund; Universal Service Reform – Mobility Fund, Order on Reconsideration and Second Report and Order*, FCC 17-102, ¶ 29 (Aug. 4, 2017) (“*MF-II Challenge Process Order*”); see also e.g. [AT&T Services, Inc., Atlantic Tele-Network, Inc., and Buffalo-Lake Erie Wireless Systems Co. Revised Joint Proposal for Mobility Fund Phase II](#), WT Docket No. 10-208, WC Docket No. 10-90, at p. 4 (Feb. 9, 2017) (“*AT&T Proposal*”).

¹⁴ *Connect America Fund, Universal Service Reform – Mobility Fund; Comments* of the Competitive Carriers Association; WC Docket No. 10-90, WT Docket No. 10-208; at pp. 2-3 (Nov. 8, 2017) (“*CCA Comments*”).

¹⁵ *Public Notice* at ¶ 28.

¹⁶ *CCA Comments* at p. 3.

will allow prospective challengers the time necessary to “staff up” an internal speed test team or secure speed test services from a third party vendor.

II. USE OF A ONE SQUARE KILOMETER GRID AS PROPOSED WILL BE UNDULY BURDENSOME FOR SMALL AND RURAL PROSPECTIVE CHALLENGERS.

In order to generate a map of unsubsidized qualified 4G LTE coverage for each provider, Commission staff proposes to (among other things) “overlay a uniform grid with cells of one square kilometer (1 km by 1 km) on the provider’s coverage map...”¹⁷ For each of these grid cells, the USAC portal system “would apply a buffer (i.e., draw a circle of fixed size) with a radius of one-quarter of one kilometer...to each counted speed test and determine the total portion of this buffered area that overlaps with the coverage map of the challenged provider for whose network the speed test measurement was recorded...”¹⁸ If a challenger has not submitted speed tests that, when buffered and aggregated across providers, dispute at least 75 percent of the coverage in that grid cell, the challenge would presumptively fail.¹⁹

RWA expressed concern with this proposal because in the majority of rural America, roads are situated directly on the borders of a one *mile* by one *mile* grid.²⁰ As RWA illustrated, a one square kilometer grid cell could be entirely encapsulated within a one square mile road grid

¹⁷ *Public Notice* at ¶ 4.

¹⁸ *Id.* at ¶ 20.

¹⁹ *Id.* at ¶ 21.

²⁰ *RWA Comments* at p. 3; *see also e.g.* Richard T.T. Forman, Daniel Sperling, John A. Bissonette, Anthony P. Clevenger, Carol D. Cutshall, Virginia H. Dale, ROAD ECOLOGY: SCIENCE AND SOLUTIONS, at p. 342 (2002) (stating “the thoroughly regular road network of the Great Plains, so evident on flights across the Midwest, marks the section lines forming a 1-mi (1.6-km) grid. These roads provide access to the agricultural fields, which range up to a full square mile (2.6 km²) in extent and necessitate highly mechanized management processes”); *see also* U.S. Geological Survey, *The Public Land Survey System (PLSS)*, available at https://nationalmap.gov/small_scale/a_plss.html (last visited Nov. 11, 2017) (explaining that the PLSS typically divides land into 6-mile-square townships, which is the level of information included in the National Atlas. Townships are subdivided into 36 one-mile-square sections).

cell, leaving no access to drive a complete single kilometer-based grid cell.²¹ Due to the lack of road access, it would not be physically possible to challenge such a grid cell under the currently proposed rules. RWA urged the Bureaus to create an exception applicable to rural areas where road grids are one square mile or larger.²² If a cell that abuts against (or is in a group of) blocks where the challenge has been deemed presumptively successful, then that cell should be automatically considered the subject of a presumptively successful challenge if it is identified by the challenger as not being drivable. Further, if four or more of the surrounding grids cells do not meet the Commission's requisite speed threshold, then the inaccessible grid cell should also be considered eligible for MF-II support.²³

ATN International, Inc. ("ATN"), too, expressed concern with the Bureaus' proposal, stating that the proposal's basis of one kilometer squares and buffer radii of one-quarter of a kilometer would "require challengers to obtain an excessive number of measurements in order to mount successful challenges," and make "participation in the challenge process cost- and time-prohibitive, particularly for small carriers."²⁴ ATN noted that challenge process participants are likely to have to take measurements using "costly and time-consuming procedures such as sending personnel on foot into areas that are nowhere near a public road,"²⁵ and that "[b]ecause the area of a circle with a radius of one-quarter kilometer is less than 20 percent of a square kilometer, challengers would be required to obtain at least four measurements per square kilometer grid cell in order to reach the 75 percent coverage threshold for a successful

²¹ See *RWA Comments* at Exhibit 1.

²² *Id.* at p. 4.

²³ *Id.* at pp. 4-5.

²⁴ *Connect America Fund, Universal Service Reform – Mobility Fund; Comments* of ATN International, Inc.; WC Docket No. 10-90, WT Docket No. 10-208; at p. 2 (Nov. 8, 2017) ("*ATN Comments*").

²⁵ *Id.* at p. 3.

challenge.²⁶ RWA agrees that having to perform at least four such tests for every square kilometer challenged would create an insurmountable burden for many potential challengers – particularly smaller carriers with more limited resources.”²⁷

To address this issue, ATN proposes two possible solutions. RWA urges consideration of both in addition to the exception discussed above. ATN notes that one solution would be to “allow challengers to take their measurements along the boundaries of the census block or census tract being challenged. Because the boundaries of census blocks and census tracts are often roads, this would facilitate parties’ ability to take measurements without creating undue burdens from having to gain access to large areas that are not vehicle-accessible.”²⁸

Alternatively, if the Bureaus wish to retain the proposal to use a grid to evaluate challenge submissions, RWA joins ATN in urging the Bureaus to reduce the burden by using a larger grid and a larger buffer radius.²⁹ The Commission has already decided that the maximum distance between measurements could be up to one mile.³⁰ As a result, a requirement to obtain signal readings from at least four points for each one-square-kilometer grid is excessive and unnecessary. The Bureaus could instead “use a one-mile grid, and apply buffer circles around challenge measurements with a radius of one-half mile.”³¹ This approach would reduce the testing burden to a more manageable level – particularly for smaller carriers, and especially if the new one-mile grid could be matched up with the one-mile road grids utilized throughout rural America.

²⁶ *ATN Comments* at p. 3.

²⁷ *Id.*

²⁸ *Id.* at pp. 3-4.

²⁹ *Id.* at p. 4.

³⁰ *MF-II Challenge Process Order* at ¶ 51.

³¹ *ATN Comments* at p. 4.

III. THE BUREAUS SHOULD MODIFY THE PROPOSAL REGARDING DATA SPEED THROTTLING.

Noting that some providers may reduce the speed of data on their networks for network management purposes (e.g., in the case of large data usage by particular users), the Bureaus propose to allow a challenged party to submit data that identify a particular device that a challenger used to conduct its speed tests as having been subjected to reduced speeds, along with the precise date and time the speed reductions were in effect on the challenger's device.³² RWA joins other parties in opposing this proposal.³³

First, RWA agrees with NTCA that “the Commission’s proposal regarding managed networks inserts unnecessary uncertainty in the process,”³⁴ by suggesting “that challenged providers could refute (or effectively ‘counter-challenge’) challenger speed test data by asserting that the data speeds were throttled on the device used during the testing period.”³⁵ NTCA is rightfully concerned that “[t]his practice would undermine, if not eviscerate, the validity of the challenge process – it risks becoming the exception that swallows the rule.”³⁶ Further, the Bureaus have identified no procedure or standards for a challenger to refute a challenged party’s claim that its network performs better than the challenger’s experience and data.”³⁷ CCA has similar concerns, noting that “[w]hether a carrier engages in throttling for network management purposes should not form part of the consideration of whether an area is eligible for MF-II support. Moreover, the proposal unnecessarily creates a loophole for challenged parties to argue

³² *Public Notice* at ¶ 14.

³³ *See RWA Comments* at p. 7.

³⁴ *NTCA Comments* at pp. 2-3.

³⁵ *Id.*

³⁶ *Id.* at p. 3.

³⁷ *Id.*

that the challenger's collected data is wrong without providing the challenger an opportunity to respond.”³⁸

Further, RWA continues to be concerned that, under the Bureau's proposal, a challenger would have two options – neither of them good: (1) constantly monitor the data usage to ensure that they do not go over the data plan limits, and then switch out phones with fully used data plans for phones with fresh data plans; or (2) put forth the time, effort, and resources to mount a full challenge, only to find out later that the phone's data had been throttled.³⁹ NTCA agrees, noting that “[i]f data is capable of being throttled during speed testing, there is no way for any challenger to know whether the data it is collecting and submitting is valid and represents the limitations of the network in question.”⁴⁰ RWA and NTCA agree that “[t]he challenge process will be time consuming and costly for small providers under the best of circumstances, but the Commission's proposal, if adopted, will lead to...wasted effort.”⁴¹

RWA continues to believe that it would be much more efficient for the challenger and challenged carrier to coordinate this issue *before* the speed test data is recorded.⁴² If challengers must sign a non-disclosure agreement or similar document in order to receive carrier-specific coverage data,⁴³ it is not a leap for the Bureaus to require the challenger to notify the challenged carrier that it is testing its network and require the challenged carrier to remove the data cap on the phone(s) in question to avoid throttling during the challenge period. Such coordination will allow challengers to review actual speed data as it is compiled, and make reasonable

³⁸ *CCA Comments* at p. 4.

³⁹ *RWA Comments* at p. 7.

⁴⁰ *NTCA Comments* at p. 3.

⁴¹ *Id.*

⁴² *RWA Comments* at p. 7.

⁴³ *Public Notice* at ¶ 5 (stating “[t]he maps of unsubsidized coverage for specific providers would only be made available to challengers through USAC's online challenge portal (the USAC portal) after challengers agree to keep such maps confidential.”).

determinations as to whether a particular challenge is likely to be successful. Challengers would be able to do this *before* expending the time, effort, and financial resources necessary to compile *all* of the data, submit it to the FCC, and then wait for the challenged carrier to compile and submit data regarding possible throttling.

Such coordination would also render the speed test measurement and speed reduction report proposals by Verizon (and opposed by RWA) unnecessary.⁴⁴ Verizon proposes to “require challengers either to (1) conduct all testing using service plans that do not include specific speed reduction terms; or (2) conduct all testing with devices that are not subject to the plan’s specific speed reduction terms.”⁴⁵ RWA understands that challengers “must purchase an appropriate service plan from each unsubsidized service provider in the challenged area,” and that an “appropriate service plan” is one that “would allow for speed tests of full network performance, *e.g.*, an unlimited high-speed data plan.”⁴⁶ But RWA also understands that “unlimited” plans are often not actually unlimited in practice.⁴⁷

RWA urges the Bureaus to require the challenger to notify the challenged carrier that it is testing its network and require the challenged carrier to remove the data cap on the phone(s) in question to avoid throttling during the challenge period. If the Bureaus are unwilling to require such coordination, then the Bureaus should accept speed test results from phones on unlimited data plans as they are – regardless of any throttling that may have occurred. This is particularly true given the Commission’s desire to “to accurately reflect consumer experience in the

⁴⁴ *Connect America Fund, Universal Service Reform – Mobility Fund*; [Comments](#) of Verizon; WC Docket No. 10-90, WT Docket No. 10-208; at pp. 5-6 (Nov. 8, 2017).

⁴⁵ *Id.* at p. 5.

⁴⁶ *MF-II Challenge Process Order* at ¶ 50.

⁴⁷ *Verizon Comments* at p. 6 (noting that “under some service plans, such as Verizon’s ‘Beyond Unlimited’ plan, data speeds may be slowed temporarily in times of congestion once a monthly usage threshold is met).

challenged area...”⁴⁸ If consumers that have purchased unlimited data plans are being throttled in the challenged area, then the tested speeds reflect the consumer experience and should be utilized in the challenge process.

IV. THE BUREAUS SHOULD REQUIRE SERVICE PROVIDERS TO IDENTIFY A VARIETY OF HANDSET MODELS APPROPRIATE FOR TESTING COVERAGE.

In the *MF-II Challenge Process Order*, the Commission specified that service providers with qualified 4G LTE coverage will be required to identify at least three readily available handset models appropriate for testing those providers’ coverage.⁴⁹ Challengers electing to use application-based tests and software-based drive tests must use the applicable handsets specified by each service provider with coverage in the challenged area.⁵⁰

a. The Bureaus Should Require Carriers That Support Both Android and iOS Devices to Ensure That At Least One of the Three Identified Testing Devices Uses the Android Operating System.

In its initial comments, RWA urged the Bureaus to “provide further guidance on the type of devices that each network provider must identify as appropriate for testing,” and to require that carriers support “both iOS and Android operating systems.”⁵¹ First, as noted by CCA “coverage and service results may differ based upon the operating system in use on the handset (i.e., Android versus iOS).”⁵² As such, RWA agrees with Mosaik that “to the extent the

⁴⁸ *MF-II Challenge Process Order* at ¶ 50.

⁴⁹ *Id.* at ¶ 47; *see also Public Notice* at ¶ 7.

⁵⁰ *MF-II Challenge Process Order* at ¶ 50; *see also Public Notice* at ¶ 7.

⁵¹ *RWA Comments* at p. 8.

⁵² *CCA Comments* at p. 4.

challenged carrier sells an Android device, a representative testing scenario would need to ensure that at least one of the three testing devices uses the Android operating system.”⁵³

In its initial comments, RWA warned that “[l]imiting challengers to devices with iOS operating systems will radically decrease the information that may be collected and reduce additional benefits a challenger may receive from performing drive or application-based tests.”⁵⁴

Mosaik agreed, stating that:

Limiting device-based testing to iOS-run equipment will drastically reduce the amount of information that challenging parties may be able to collect. Moreover, Apple devices running iOS are typically more expensive than devices that use the Android operating system. Forcing an interested stakeholder to procure iOS devices will increase challenge costs while limiting ancillary data collection and analysis options the challenger can benefit from. Challengers will be less likely to lodge coverage disputes if they are limited to using the most expensive devices to perform drive or application-based tests.”⁵⁵

RWA again urges the Bureaus to provide further guidance on the type of devices that each network provider must identify as appropriate for testing, and to require that carriers support both iOS and Android operating systems. RWA agrees that “the Commission should...not allow challenged parties to use the differences in operating systems as a loophole to the challenger’s data results,”⁵⁶ and that the “MF-II challenge process will only be successful if it accounts for the diverse portfolio of devices consumers are purchasing today.”⁵⁷

⁵³ *Connect America Fund, Universal Service Reform – Mobility Fund*; [Comments](#) of Mosaik Solutions; WC Docket No. 10-90, WT Docket No. 10-208; at p. 3 (Nov. 8, 2017) (“*Mosaik Comments*”).

⁵⁴ RWA Comments at p. 8.

⁵⁵ *Mosaik Comments* at p. 3.

⁵⁶ *CCA Comments* at pp. 4-5.

⁵⁷ *Mosaik Comments* at p. 2.

b. The Bureaus Can Reduce Barriers to Testing Challenges by Setting an Upper Limit on the Per-Device Cost of a Readily Available Handset Model, Regardless of Operating System.

In its initial comments, and in its April 2017 comments submitted in response to the Commission's *Challenge Process FNPRM*, RWA urged the Commission to place limits on how expensive the devices are, regardless of operating system.⁵⁸ The Commission has stated that it wants to ensure that the evidence submitted by challengers...accurately reflects consumer experience in the challenged area..."⁵⁹ Subscribers are now paying for their own handsets, and often purchase the most inexpensive device available. Further, an operator that may be challenged could place undue financial burdens on potential challengers by stipulating that only highest-cost devices compatible with drive test equipment be used. As such, RWA urged the Bureaus to require service providers to identify at least one low-cost device out of the three that it submits in response to the one-time data collection.⁶⁰

Mosaik agreed with RWA that device cost is an important issue, noting that iOS devices are typically more expensive than devices that use the Android operating system and urging the Bureaus to "promote a robust, fully fledged challenge process by adopting parameters for device costs."⁶¹ RWA supports Mosaik's proposal that the Bureaus "require a challenged carrier to make at least one device available from the bottom third, middle third and upper third of its device portfolio based on retail price."⁶²

⁵⁸ *RWA Comments*, at p. 8; see also *Connect America Fund, Universal Service Reform – Mobility Fund*; [Comments of the Rural Wireless Association, Inc.](#), WC Docket No. 10-90, WT Docket No. 10-208 (Apr. 26, 2017) (stating "[i]f a specific group of handsets is proscribed for testing purposes, this group should include some low cost devices").

⁵⁹ *MF-II Challenge Process Order* at ¶ 49.

⁶⁰ *RWA Comments* at pp. 8-9.

⁶¹ *Mosaik Comments* at pp. 3-4.

⁶² *Id.* at p. 4.

V. THE BUREAUS SHOULD CLARIFY THAT A “QUALIFIED ENGINEER” MAY WORK DIRECTLY FOR AN OPERATOR OR A VENDOR ON BEHALF OF AN ELIGIBLE CHALLENGER.

The Commission has stated that it will “require that the speed test data be substantiated by the certification of a qualified engineer or official under penalty of perjury.”⁶³ In its initial comments, RWA urged the Bureaus to clarify that a “qualified engineer” may work directly for an operator or a third party on behalf of an eligible challenger given that small and rural wireless carriers often do not retain in-house engineering staff.⁶⁴

Mosaik agreed, stating that “[m]any smaller service providers will not have dedicated resources to commit to the MF-II challenge process,” and that “resource availability and other business decisions may dictate that a provider wishing to issue or defend a challenge must hire a third-party vendor to conduct the analysis and certify the test data.”⁶⁵ RWA joins Mosaik in urging the Bureaus to “provide clarity...by affirming (or reaffirming) that participating entities may provide certifications from outside, third-party vendors so long as the certifying organization or individual has actual knowledge of the accuracy of the underlying data.”⁶⁶

VI. THE BUREAUS SHOULD NOT REQUIRE CHALLENGERS TO SUBMIT EXTRANEOUS DATA PARAMETERS WHEN DOWNLOAD SPEEDS ARE THE ONLY FACTOR IN DETERMINING AN AREA’S MF-II FUNDING ELIGIBILITY.

In addition to requiring the parameters adopted by the Commission (geographic area, recorded speed, time and date of measurement, and handset used), the Bureaus propose to require challengers to provide other data parameters associated with a speed test. Such parameters include: (1) signal strength; (2) latency; (3) the service provider identity; (4) the

⁶³ *MF-II Challenge Process Order* at ¶ 49.

⁶⁴ *RWA Comments* at p. 10.

⁶⁵ *Mosaik Comments* at p. 5.

⁶⁶ *Id.* at pp. 5-6.

device used (which must be from the service provider's list of pre-approved handsets); (5) the international mobile equipment identity (IMEI) of the tested device; (6) the method of the test (i.e., software-based drive test or non-drive test app-based test); and (7) if an app was used to conduct the measurement, the identity and version of the app.⁶⁷ As discussed in its initial comments, RWA opposes this proposal because challengers will waste limited time and resources recording additional data given that the only eligibility criterion is speed throughput.⁶⁸

Verizon would have prospective challengers submit *even more* information in order to mount a successful challenge, urging the Bureaus to require prospective challengers to file “information about the server that they used for speed and latency testing.”⁶⁹ Verizon notes that the “location of the server and other attributes of the server will affect the measured latency and *may* affect the measured speed as well.”⁷⁰ RWA opposes this proposal.

An area's eligibility for MF-II support is determined solely by whether or not unsubsidized service is provided in that area at the requisite download speed threshold of 5 Mbps. Latency is not at issue.⁷¹ Verizon's desire to “ensure that the challenger's test results are not distorted by the use of an inappropriate server,” can be addressed by challenged carriers during the response period. As RWA has noted, challenged carriers have ready access to their own network information, and are *welcome* to seek *any* additional data they deem relevant to the provision of their own claimed unsubsidized service when responding to a challenge. Further,

⁶⁷ *Public Notice* at ¶ 12.

⁶⁸ *RWA Comments* at p. 5.

⁶⁹ *Verizon Comments* at p. 2.

⁷⁰ *Id.* at pp. 2-3 (*emphasis added*).

⁷¹ *MF-II Challenge Process Order* at ¶ 14 (affirming that the Commission will use a 5 Mbps download speed benchmark to determine what coverage counts as qualified 4G LTE for the purpose of identifying areas eligible for MF-II support).

Verizon’s new concerns about the difficulties posed by a 30-day challenge response window⁷² are disingenuous. Verizon had no such concerns about the brevity of a 60-day challenge period, nor a 30-day response window, earlier in this proceeding.⁷³

VII. TRANSMITTER MONITORING SOFTWARE DATA IS NOT APPROPRIATE TO BE USED TO REBUT A CHALLENGE.

Under the MF-II challenge process framework adopted by the Commission, challenged parties may submit device-specific data collected from transmitter monitoring software (“TMS”).⁷⁴ The Bureaus propose to allow challenged parties to submit transmitter monitoring software data that is “substantially similar” in form and content to speed test data in order to facilitate comparison of such data during the adjudication process.⁷⁵ RWA has continued concerns with this proposal given questions regarding TMS accuracy.

TMS is a network performance/planning tool that approximates subscribers’ geo-location. TMS calculates geo-location from the timing and triangulation of each device’s signaling and logs from the switch/ element management system (“EMS”). It is RWA’s understanding that TMS can calculate geo-locations with distance errors of more than ½ mile. As such, the TMS triangulation method is not appropriate to be used to rebut a challenge.⁷⁶

⁷² *Verizon Comments* at p. 2.

⁷³ [Reply Comments](#) of Verizon, WC Docket No. 10-90, WT Docket No. 10-208, at p. 5 (May 11, 2017) (stating “the Commission should adopt the CTIA proposal”). Under the CTIA proposal, “any challengers would then have...60 total days...to submit their challenge(s) to the Commission...[p]roviders whose data are the subject of a challenge would then have no more than 30 days...to either (a) submit the required responsive evidence described below or (b) notify the Commission that it will not respond. [Comments and Petition for Reconsideration](#) of CTIA, WC Docket No. 10-90, WT Docket No. 10-208, at pp. 17-18 (Apr. 26, 2017).

⁷⁴ *MF-II Challenge Process Order* at ¶ 60; *see also Public Notice* at ¶ 15.

⁷⁵ *Public Notice* at ¶ 15.

⁷⁶ *Connect America Fund, Universal Service Reform – Mobility Fund*; [Letter](#) from Rebecca Murphy Thompson, EVP & General Counsel, Competitive Carriers Association, to Ms. Marlene H. Dortch, Secretary, Federal Communications Commission (July 27, 2017) (stating that

VIII. CONCLUSION.

RWA urges the Bureaus to adopt MF-II challenge process requirements that do not impose egregious costs on rural wireless carriers with already-limited resources. First, the Bureaus should ensure that the challenge process timeline does not impede participation. Due to problems associated with the Bureaus' proposals to utilize a one square kilometer grid in rural areas where roads are situated directly on the borders of a one *mile* by one *mile* grid, RWA urges the adoption of an exception applicable to rural areas where road grids are one square mile or larger. The Bureaus should also consider allowing challengers to take their measurements along the boundaries of the census block or census tract being challenged and using a larger grid and a larger buffer radius.

Further, RWA continues to believe that it would be much more efficient for the challenger and challenged carrier to address throttling issues *before* the speed test data is recorded. Such coordination would render the speed test measurement and speed reduction report proposals by Verizon (and opposed by RWA) unnecessary. In addition, RWA urges the Bureaus *not* to require challengers to submit extraneous data parameters when download speeds are the only factor in determining an area's MF-II funding eligibility, and reiterates its concern regarding the appropriateness of transmitter monitoring data used to rebut a challenge. Finally, the Bureaus should require service providers to identify a variety of handset models appropriate for testing coverage and clarify that a "qualified engineer" may work directly for an operator or a vendor on behalf of an eligible challenger. RWA looks forward to its continued work with the Chairman, Commissioners, and Commission staff in this proceeding.

transmitter monitoring data "can be easily manipulated base on time of day and period of collection and can produce unreliable geo-location results").

Respectfully submitted,

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